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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/770,406

02/04/2004

Tomio Kumamoto

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09/27/2006

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EXAMINER

HUNTER, ALVIN A

ART UNIT

PAPER NUMBER

3711

DATE MAILED: 09/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/770,406

Applicant(s)

KUMAMOTO, TOMIO

Examiner

Alvin A. Hunter

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 and 12-24 is/are pending in the application.
- 4a) Of the above claim(s) 8-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 13-24 is/are rejected.
- 7) ☒ Claim(s) 12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

The indicated allowability of claim 3 is withdrawn in view of the newly discovered reference(s) to Dill (USPN 6102813). Rejections based on the newly cited reference(s) follow.

#### ***Claim Objections***

Claims 4 and 16 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The limitations of claims 4 and 16 are already recited in claim 1. Claims 4 and 16 should not depend from claim 1.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 3 and 17 are rejected under 35 U.S.C. 102(a & e) as being anticipated by Chen (USPN 6645086).

Regarding claim 3, Chen discloses a hollow golf club head having a face portion whose front face defines a club face for striking a ball, a crown portion, a sole portion, a side portion between the crown portion and sole portion, and a hosel portion, and comprising a metal component made of a metal material, and a resin component made of a fiber reinforced resin, wherein the resin component comprises a crown plate forming at least a part of the crown portion, the metal component comprising a face plate forming at least a part of the face portion and a sole plate forming at least a part of the sole portion, and a hosel portion integrally including a tubular part into which a club shaft is inserted (See Figure 1 and Summary of the invention).

Regarding claim 17, Chen discloses the resin component having a side plate forming at least a part of the side portion.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4, 6, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheng et al. (6932875) in view of Chen (USPN 6645086) and Robertson (USPN).

Regarding claims 1, 4, and 16, Chen discloses a hollow golf club head having a face portion whose front face defines a club face for striking a ball, a crown portion, a sole portion, a side portion between the crown portion and sole portion, and a hosel

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portion, and comprising a metal component made of a metal material and a resin component made of a fiber reinforced resin wherein the metal component comprises a face plate forming the entirety of the face portion and a sole plate forming the almost the entirety of the sole portion and a resin component comprising a crown plate forming the crown portion and a side plate forming the side portion (See Summary of the Invention and Figure 1). The resin component is provided with an opening for accommodating the face portion and the sole portion of the metal component. Cheng et al. does not disclose the resin component having a flange for supporting the face or having a sole that increases in thickness towards the rear. Chen discloses a hollow club head having a metal component and a resin component in which the resin component wherein the metal component forms almost the entirety of the face portion (See Figure 1). Chen discloses the resin component having a recessed area for accommodating the face plate. Because of the fact that the recess portion supports the face plate in the same manner as the flange of the applicant, one having ordinary skill in the art would find the recess of Chen and the flange of the applicant's to be obvious mechanical equivalents. Further, one having ordinary skill in the art would have found it obvious to have use the recess of the Chen within the club head of Cheng et al. in order to support the face plate. Robertson discloses a sole plate in which the sole plate can vary in thickness for adjusting the weight of the club head (See Entire Document). In one embodiment, Robertson shows the sole gradually increasing in thickness toward the rear of the club head (See Figure 4). One having ordinary skill in the art would have found it obvious to incorporate the sole taught by Robertson into the club head of Cheng et al. in order to

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adjust the weight of the club head. Though Robertson is silent to explicit dimensions for the sole plate, it is noted that applicant does not note the criticality of the dimensions. One having ordinary skill in the art would have found it obvious to have the thicknesses of the sole plate to value suitable for the user in order to optimize the weight distribution of the club head.

Regarding claim 6, Cheng et al. discloses the sole plate having a continuous rib on the fringe.

Claims 13-15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cheng et al. (6932875) in view of Chen (USPN 6645086) and Robertson (USPN) further in view of Yamaguchi et al. (JP 09253242).

Regarding claims 13-15, Cheng et al. in view of Chen and Robertson do not explicitly disclose the center of gravity depth of the club head. Yamaguchi et al. discloses a club head having a center of gravity depth of 25 to 50mm (See Abstract). Yamaguchi et al. discloses a club head having a specific gravity depth of 25 to 50mm (See Entire document). Yamaguchi et al. also discloses a club head where in the sweet spot is about 18.5mm or less based on the height of the club face because the center of gravity is show to occur at a distance which is at about the halfway point of the face h (See Paragraph 0011 and Figures 1 and 8). One having ordinary skill in the art would have found it obvious for Cheng et al. in view of Chen and Robertson to have a specific gravity depth and sweet spot height of that taught by Yamaguchi in order to improve engine performance.

Claim 2, 4, 6, 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen (USPN 6645086) and Dill (USPN 6102813).

Regarding claim 2, Chen discloses a hollow golf club head having a face portion whose front face defines a club face for striking a ball, a crown portion, a sole portion, a side portion between the crown portion and sole portion, and a hosel portion, and comprising a metal component made of a metal material, and a resin component made of a fiber reinforced resin, wherein the resin component comprises a crown plate forming at least a part of the crown portion, the metal component comprising a face plate forming at least a part of the face portion and a sole plate forming at least a part of the sole portion, and a hosel portion including a tubular part into which a club shaft is inserted (See Figure 1 and Summary of the invention). Chen does not disclose the tubular portion integrally formed with the metal component. Dill discloses a hollow club head having a metal component and a resin component and a hosel wherein the hosel is integrally formed with the metal component and extending upwardly from the sole and being connected to the metal component only at the sole plate (See Figure 1). One having ordinary skill in the art would have found it obvious to have the tubular part of the hosel of Chen integrally formed with the metal component and connected to only the sole part, as taught by Dill, in order to adjust the center of gravity to improve the control of the club head.

Regarding claim 4, Chen discloses the resin component including a side plate forming at least a part of the side portion.

Regarding claim, 6, Chen discloses the sole portion having a discontinuous rib on the fringe (See Figure 4).

Regarding claim 7, see the above regarding claim 5 and 6.

Claims 5, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen (USPN 6645086) and Dill (USPN 6102813) further in view of Robertson (USPN).

Regarding claims 5 and 18, Chen in view of Dill does not disclose the sole thickness increasing toward the rear of the club head. Robertson discloses a sole plate in which the sole plate can vary in thickness for adjusting the weight of the club head (See Entire Document). In one embodiment, Robertson shows the sole gradually increasing in thickness toward the rear of the club head (See Figure 4). One having ordinary skill in the art would have found it obvious to incorporate the sole taught by Robertson into the club head of Chen in view of Dill in order to adjust the weight of the club head.

Regarding claim 19, Chen discloses the sole portion having a discontinuous rib on the fringe (See Figure 4).

Regarding claim 20, see the above regarding claims 18 and 19.

Claims 13-15 and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen (USPN 6645086) and Dill (USPN 6102813) further in view of Yamaguchi et al. (JP 09253242).

Regarding claims 13-15 and 21-23, Chen in view of Dill do not explicitly disclose the center of gravity depth of the club head. Yamaguchi et al. discloses a club head

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having a center of gravity depth of 25 to 50mm (See Abstract). Yamaguchi et al. discloses a club head having a specific gravity depth of 25 to 50mm (See Entire document). Yamaguchi et al. also discloses a club head where in the sweet spot is about 18.5mm or less based on the height of the club face because the center of gravity is show to occur at a distance which is at about the halfway point of the face h (See Paragraph 0011 and Figures 1 and 8). One having ordinary skill in the art would have found it obvious for Chen in view of Dill to have a specific gravity depth and sweet spot height of that taught by Yamaguchi in order to improve engine performance.

***Allowable Subject Matter***

Claim 12 is allowed.

***Response to Arguments***

Applicant's arguments with respect to claims 1-7 and 12-16 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alvin A. Hunter whose telephone number is (571) 272-4411. The examiner can normally be reached on Monday through Friday from 7:30AM to 4:00PM Eastern Time.

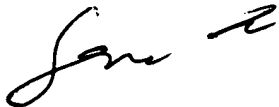
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Kim, can be reached on 571-272-4463. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AAH

Alvin A. Hunter, Jr.

  
EUGENE KIM  
SUPERVISORY PATENT EXAMINER